Forward

Solid Waste Management Bureau
A Division of Department of Health and Environmental Sciences
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Where Should Your Solid Waste Go?

The Solid Waste Management Bureau is going to the people with the information and alternatives resulting from the statewide solid waste management and resource recovery study which is two-thirds completed.

Civic leaders and public officials throughout the state are invited to participate in five regional meetings to review and comment on the planning effort to date. The final step of the study is development of a comprehensive statewide solid waste management plan which will affect most areas in the state.

Terry Carmody, bureau chief, says, "It is often the complaint of citizens and civic leaders that planning done by state agencies which affects communities and counties is done without allowing significant local review and comment. We do not intend to have that criticism leveled at this study."

Carmody said every aspect of the study is open to public scrutiny and involvement so that the final plan will fit the needs of each particular area. He said resource recovery and proper solid waste management have the potential of achieving reductions in the total cost of solid waste disposal and providing for the improvement of a needed public service.

Information to be presented at these meetings include the volume of solid waste generated, quantities and composition in the state and potential markets for recoverable materials and fuel and energy. A review of solid waste utilization and disposal alternatives will be presented including information about sanitary landfills, transfer stations, and processing and utilization alternatives. There will also be a comparison of alternative methods of disposal, processing and utilization.

Carmody expressed the hope that the planned meetings will be well attended by the general public as well as local officials. The meetings have been scheduled for:

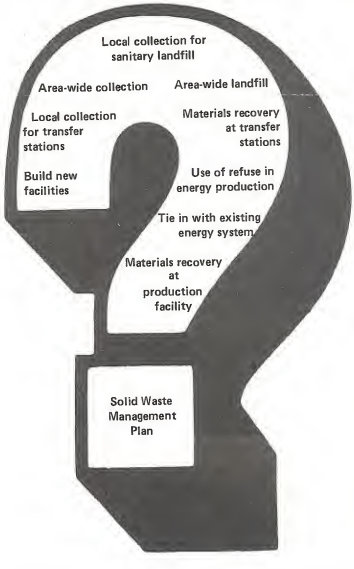
(1) Monday, August 16, 1:30 p.m.. . . . . HELENA
Auditorium, Civic Center

(2) Tuesday, August 17, 1:30 p.m. . . . . .MISSOULA
University of Montana, Student Center, Montana Rooms

(3) Wednesday, August 18, 1:30 p.m.. . . . . .GREAT FALLS
Banquet Room, Civic Center

(4) Thursday, August 19, 1:30 p.m.. . . . . GLENDIVE
Dawson College, Student Center

(5) Friday, August 20, 1:30 p.m.. . . . . BILLINGS
Eastern Montana College, Library 148, Liberal Arts Building



What Is Garbage Power?

Excerpts from an article in CATALYST by Ronald Kinsey, President Resource Technology Corporation.

A growing number of garbage-to-energy programs are being planned and those that are in operation are moving forward. These programs involve industry and government cooperation in a variety of arrangements not tried before. They have helped make it economically feasible to begin recovering other materials such as metals, glass and paper in numerous communities and have made a very real impact on the solid waste disposal problem. Garbage to energy programs are a prime example of how technology can be used to help the environment.

Nationally, garbage-to-energy systems which are at least as far as the planning stage should be generating some 147 trillion BTU's of energy within ten years. This will result in a savings of about 28 million barrels of low sulfur oil or 7 million tons of coal annually. Considering there were no such systems in the U.S. just four years ago, this will be a pretty fair achievement - even if we fall a few BTU's short of the projections. While this won't solve all of our national energy problems, it can be a worthwhile step toward achieving a solution.

Editors note: The 355,000 tons of combustible material generated in Montana has an equivalent heat value of approximately 3,550,000 MCF of natural gas and 222,000 tons of Eastern Montana coal.

Fortunately, we don't have to wait to see if garbage is an effective fuel. Cities in Europe and the Far East have been producing energy from trash for as long as twenty years, One Swiss engineering firm alone has developed 88 garbage-to-energy systems which are now in operation in various countries and fifty more are under construction around the world.

America's pioneering system in St. Louis burns shredded waste along with pulverized coal to generate electricity and has been operating since April 1972. Another system of this type, in Ames, Iowa, started operating last year. One of the nation's more comprehensive resource recovery systems, this facility reclaims steel and aluminum while processing the remaining garbage for fuel that is burned as a supplement to pulverized coal in the community's municipally-owned electric utility plant.

Another process known as Eco-Fuel II involves shredding, treating, and drying the garbage with the end product being a powder-like, low sulfure solid fuel material with a heat content of almost 8000 BTU's per pound. This garbage derived fuel can be

(continued on overleaf)

used by itself, or to supplement coal or oil.

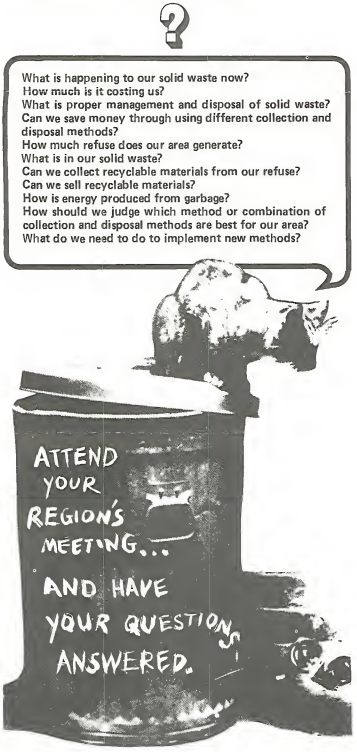
In Appleton, Wisconsin, solid waste is being tested as a supplementary fuel for a paper company plant. In Lane County, Oregon, plans are underway for a local utility to use solid waste, along with wood or logging wastes to generate electricity.

In addition to the tremendous variety of individual community resource recovery programs, progress is being made in the development of statewide systems. Connecticut's program is probably the most advanced with ground already broken for the first two resource recovery facilities to produce Eco-Fuel II. The Connecticut system is expected to eventually include ten plants which will use about 85 percent of the state's residential and commercial solid waste to provide nearly 10 percent of the state's electric power needs by 1985.

In 1974, Wisconsin created a solid waste recycling authority to implement projects on a region-by-region basis. Steps have been taken to incorporate existing local recycling facilities within this program and tc expand other resource recovery activities. Several other states are establishing statewide programs or setting resource recovery guidelines.

Editor's Note: Montana's Solid Waste Management and Resource Recovery Study will soon be developing recommendations of specific alternatives including an analysis of garbage-to-energy systems which may work in this state. Comments, suggestions and ideas gathered from the regional meetings will directly influence the types of alternatives proposed.

Using garbage as an energy source will go a long way toward solving the growing problem of solid waste disposal for many communities. In addition to providing direct fuel savings, these programs offer important indirect energy savings by recovering metals, glass, paper and other items for recycling.



How Can You Help Make Your Trash Collector's Job Safe?

Solid waste workers have a greater risk of injury than construction workers, lumberjacks, or police officers. In fact, the rate of disabling injuries is nearly ten times that of all industry. They suffer back sprains and strains, cuts, bruises, broken and severed limbs and hernias among other injuries.

They are exposed to dust, gas carbon monoxide fumes and extreme temperatures during the course of their work day. Yet the hazards facing solid waste workers on the job are largely ignored by their employers, the government and the public.

A recent EPA survey showed that the average solid waste worker, during 25 years on the job, has a 23 percent chance of being permanently disabled to some degree and a 9 percent chance of amputation. According to the National Safety Council, publicly-operated solid waste management agencies may be less safety-conscious than their counterparts in the private sector. The total injury frequency rate for public employees is more than three times the rate of injury among private industry workers.

Each person can do something to help reduce accidents. How you handle your garbage before the collector comes can make a difference. People put chunks of concrete or other heavy materials into trash cans and cover them with paper or garbage so that the collector can't tell how heavy it is until it's too late. Back sprains account for one-fourth of all solid waste worker injuries.

Loose broken glass thoughtlessly placed in a plastic bag is a frequent cause of cuts among collectors. Broken glass should be wrapped thoroughly to separate it from other trash. Plastic bags have certain advantages for the refuse collector because they are easier to handle and carry and there is less chance of back strain for the collector and are lighter loads than cans.

Collectors are frequently injured because of old, poorly designed and maintained equipment. Workers have had their arms and hands crushed because of unprotected compactor blades or fallen because of unrepaired truck steps.

Voluntary safety standards were developed by the National Solid Waste Management Association and other interested groups which include guidelines for the design and construction of collection and compaction equipment as well as its care, maintenance and operation. In addition, the standards include safety responsibilities for the employer, operator and employee. If such a standard is widely accepted among manufacturers and consumers of refuse collection equipment, some common injuries may decline.

Every concerned citizen should urge adoption and recognition of such standards by their local government. If your area has a municipal collection service, take a good look at your garbage truck the next time it's in the neighborhood. Does it look old and worn out? Is the exhaust pipe located so that fumes are emitted into the work area? Urge your local sanitation department to replace it.

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